

# Work Order ID 65545

January 19, 2011 1:35:11 PM



Page 1

Item ID: D3650-5

Accept



Setup Start



Revision ID:

Stop



Item Name: Fwd Panel

Start Date: 1/20/11 Start Qty: 3.00



Cust Item ID:

Required Date: 1/31/11 Req'd Qty: 3.00



Customer:

Reference:

Approvals: Process Plan: mf Date: 11-01-19

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D3650	Rev C

100 0.00



FLOW WATER JET

Waterjet

Memo

0.00

FLOW CNC Waterjet

1-Cut as per Dwg D3650

Dwg Rev: C

Prog Rev: C

2-Deburr if necessary

B11-1-26

(3)

110 0.00



QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

B11-1-26

120 0.00



QC8- Inspect parts - second check

QC

Memo

0.00

Quality Control

Sublot 26

(x3)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3680-5 PAR #: N/A Fault Category: Small Fab NCR: Yes No DQA: 11/03/01 Date: 11/03/01  
 Resolution: acceptable Disposition: use-as-is QA: N/C Closed: 11/03/02 Date: 11/03/02

NCR: <u>65545</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
11/02/22	150	SEAL NOT QUITE SITTING FLUSH WITH ANGLE. Part moves when transfer Drilling. R.L. lack of attention. employee didn't check as he was Drilling.	11/02/22	ACCEPTABLE SINCE PART WILL NOT CAUSE INTERFERENCE ON INSTALL AND SEAL'S FUNCTION WILL NOT BE AFFECTED.	M.J. 11/02/22	S 11/02/22	11/02/22	S 11/02/22

NOTE: Date & initial all entries

**Work Order ID 65545**

January 19, 2011 1:35:12 PM

Page 3

Item ID: D3650-5

Accept

Revision ID:

Item Name: Fwd Panel

Start Date: 1/20/11 Start Qty: 3.00

Required Date: 1/31/11 Req'd Qty: 3.00

Reference:

Cust Item ID:

Customer:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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160

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

170

Identify as per dwg &amp; Stock Location: 189

0.00



Packaging

Memo

0.00

Packaging

180

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

(43)

11/02/23 SL (30)

11/02/24

mf  
11-02-24

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

January 19, 2011 1:35:10 PM

Page 1

Work Order ID: 65545

Parent Item: D3650-5

Parent Item Name: Fwd Panel



Start Date: 1/20/11

Required Date: 1/31/11

Start Qty: 3.00

Required Qty: 3.00

Comments: IPP Rev:A New Issue 07-09-27 DD verified by: EC  
 IPP Rev:B ECN 1113P 08-01-22 DD  
 IPP Rev:C ecn1162 08-04-02 DD verified by: EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D3650-7 Seal		Manufactured	No			150	Each	5.0000	1	3			
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Location	Loc Qty	Loc Code
st073	5	
62008	5	

D3650-9 Angle		Manufactured	No			150	Each	5.0000	1	3			
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Location	Loc Qty	Loc Code
ST189	5	
43823	2	
53489	3	

D3893-1 DOUBLER		Manufactured	No				Each	17.0000	3	3			
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Location	Loc Qty	Loc Code
GA	17	
45377	3	
52689	14	

m-l 11/02/22

3x  
m-l 11/02/22

3  
m-l 11/02/22

3x

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

January 19, 2011 1:35:10 PM

Work Order ID: 65545

Parent Item: D3650-5

Parent Item Name: Fwd Panel

Start Date: 1/20/11

Required Date: 1/31/11

Start Qty: 3.00

Required Qty: 3.00

M304S26GA

Purchased

No

150

sf

109.6600

0.813

2.567368



304/316 0.018 SHEET



1811-1-26

Location

Loc Qty

Loc Code

MAT20

109.66

109398

20.06

112885

89.6

MS20427M3-3

Purchased

No

150

Each

1,364.000

8



Rivet



112885

24

ES 11/02/17

Location

Loc Qty

Loc Code

ST318

1364

115589

1364

MS21060-3K

Purchased

No

150

Each

76.0000

2



Nut Plate



24

6

ES 11/02/17

Location

Loc Qty

Loc Code

ST302

76

109590

76

MS21062-3K

Purchased

No

110

Each

216.0000

2



Nut Plate



6

ES 11/02/17

Location

Loc Qty

Loc Code

ST302

216

109590

216

NAS9307/M-4-03

Purchased

No

150

Each

231.0000

12



RIVET



6

36

m-l 11/02/22

Location

Loc Qty

Loc Code

ST281

231

109545 ✓

231

36x

January 19, 2011 1:35:10 PM

Shop Packet Print

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

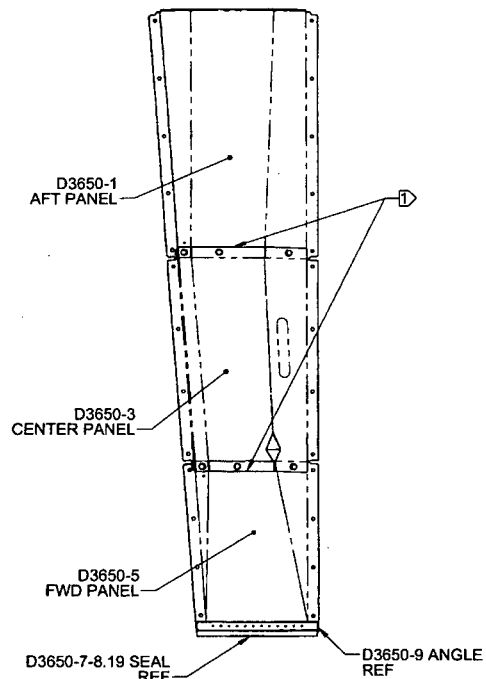
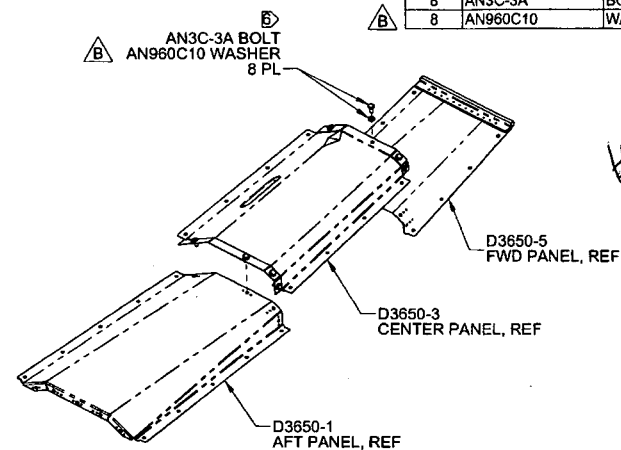
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

8 7 6 5 4 3 2 1

QTY -041	PART NUMBER	DESCRIPTION
X	D3650-041	TUNNEL TOP PANEL ASSEMBLY
1	D3650-1	AFT PANEL
1	D3650-3	CENTER PANEL
1	D3650-5	FWD PANEL
8	AN3C-3A	BOLT
8	AN960C10	WASHER

AN3C-3A BOLT  
AN960C10 WASHER  
8 PL



#65215  
DEO ATTACHED  
UNDER REVIEW  
07.07.08  
PAR 07.08  
RELEASE  
07.11.17

# D3650-041 TUNNEL TOP PANEL ASSEMBLY

## NOTES:

- 1) SEAL ALL MATING SURFACES AND ALL GAPS USING PROSEAL 700 FIRE WALL SEALANT
- 2) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) UNITS: INCHES UNLESS OTHERWISE NOTED
- 4) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 5) IDENTIFICATION: NONE
- 6) TORQUE FASTENERS 15 TO 25 in-lb
- 7) WEIGHT: 3.3 lbs

C	REFORMATTED TO NEW STANDARDS; RELOCATED PART LIST (ZN D2-2); ADDED SECTION VIEW J-J & REVISE DIMENSIONS (ZN B7-5, C4-5); ADDED RECESS LOCATION & REVISED DIMENSIONS (ZN C6-6, D5-6); MS20615-4M5 WAS CR3523-4-03 & NAS1149CN432R WAS AN960C4 (ZN D5-7; B5-7; B8-7)	RF	08.10.14
B	SHEETS 1, 2 & 7: UPDATED FASTENER QUANTITIES; UPDATED VIEWS SHEETS 3 & 8: REMOVED/RELOCATED HOLES; UPDATED VIEWS SHEET 4: 1.8 WAS 1.5; 1.0 WAS 0.8; UPDATED VIEW; ADDED NOTE 8 SHEET 5: REMOVED NOTE IN C6 & ASSOCIATED DIMS; UPDATED VIEWS SHEET 6: REMOVED/RELOCATED HOLES & ADDED CUTOFF TO D3650-3F; MOVED D3650-11/11F TO SHEET 9; ADDED DETAIL I SHEET 9: RELOCATED D3650-11/11F FROM SHEET 6; UPDATED DIMS O: D3650-11/11F	RF	08.01.07
A	NEW ISSUE	RF	07.11.07
REV.	DESCRIPTION	BY	DATE
DESIGN	RF		
DRAWN	RF		
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	08.10.14		

DART AEROSPACE LTD  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. D3650  
REV. C  
SHEET 1 OF 9

TITLE TOP PANEL ASSEMBLY  
SCALE 1:8

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8 7 6 5 4 3 2 1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

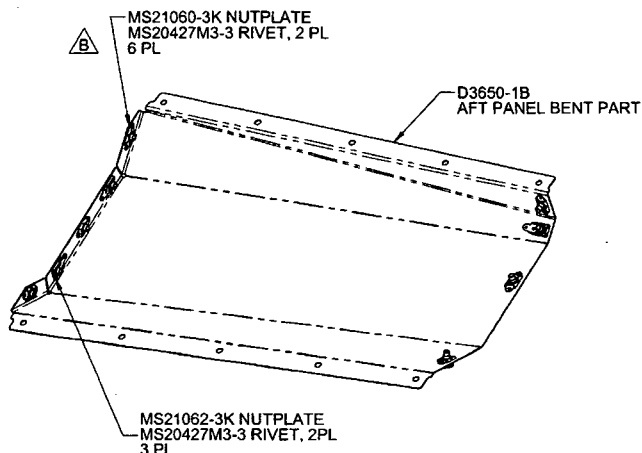
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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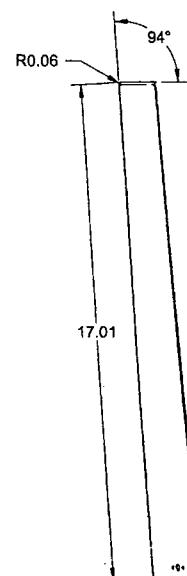
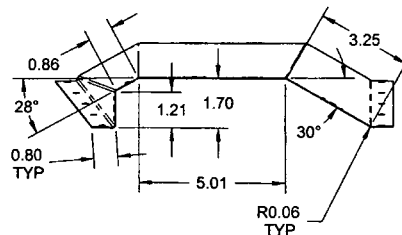
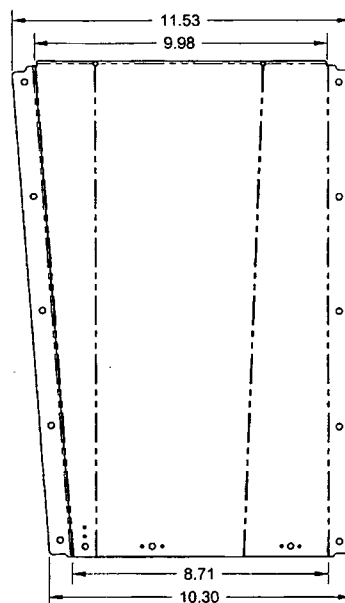
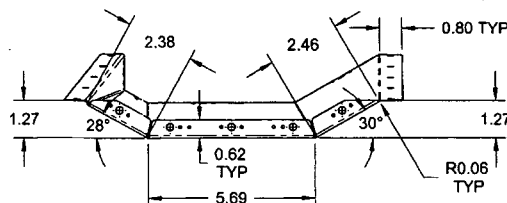
**NOTE:** Date & initial all entries

8 7 6 5 4 3 2 1

QTY	PART NUMBER	DESCRIPTION
-1	D3650-1	AFT PANEL
X	D3650-1B	AFT PANEL BENT PART
1	D3650-1B	AFT PANEL BENT PART
18	MS20427M3-3	RIVET
6	MS21060-3K	NUTPLATE
3	MS21062-3K	NUT PLATE



**D3650-1 AFT PANEL**



#65545

DEO ATTACHED

UNDER REVIEW *OK*

RELEASED *08/10/14*

**D3650-1B AFT PANEL BENT PART**  
(MAKE FROM D3650-1F FLAT PATTERN)

- NOTES:
- 1) FINISH: NONE
  - 2) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 3) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 4) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
  - 5) IDENTIFICATION: NONE
  - 6) WEIGHT: 1.3 lbs

DESIGN	RF	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3650	SHEET 2 OF 9
APPROVED		TITLE	SCALE
DE APPR.		TOP PANEL ASSEMBLY	NTS
DATE	08.10.14	COPYRIGHT © 2007 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR DISSEMINATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

8 7 6 5 4 3 2 1

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

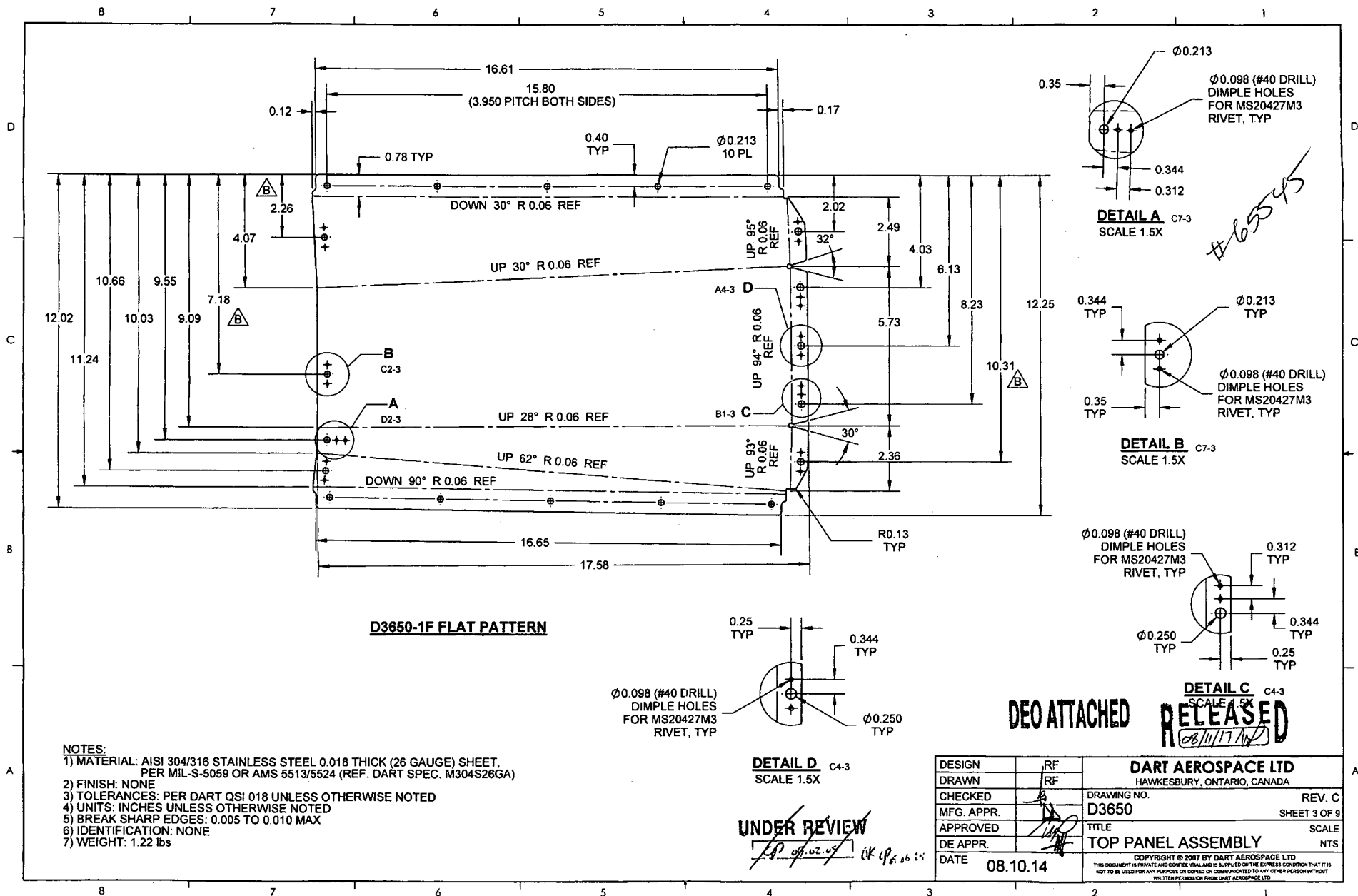
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries





W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

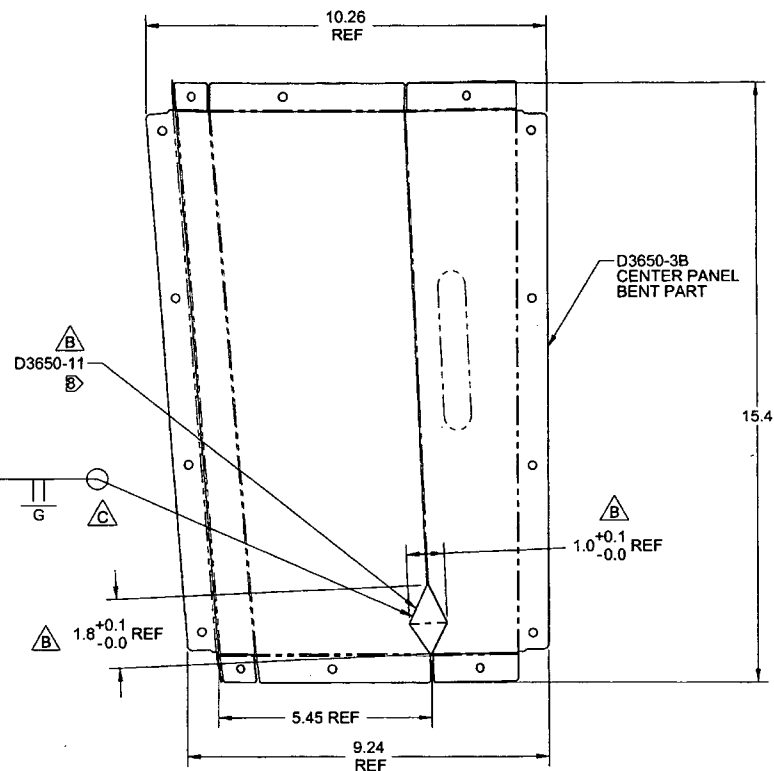
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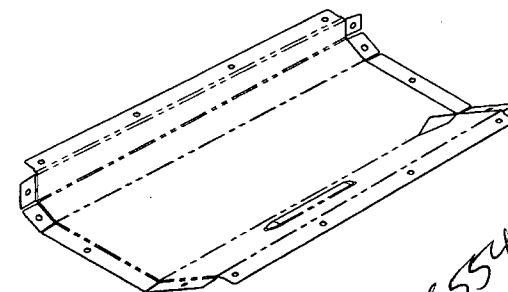
NOTE: Date & initial all entries

QTY -3	PART NUMBER	DESCRIPTION
X	D3650-3	CENTER PANEL
1	D3650-3B	CENTER PANEL BENT PART
1	D3650-11	FILLER PLATE

IT IS ACCEPTABLE  
TO GRIND & LEAVE  
0.03 FROM BOTTOM  
FLAT SURFACE



**D3650-3 CENTER PANEL**  
(LOOKING FROM OUT SIDE SURFACE)



DEO ATTACHED

RELEASED  
08/11/14

**NOTES:**

- 1) WELD PER QSI 004
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 1.0 lb
- 8) TRIM D3650-11 TO FIT AS REQUIRED

UNDER REVIEW

DESIGN	RF	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	RF	DRAWING NO. <b>D3650</b>	REV. C
MFG. APPR.			SHEET 4 OF 9
APPROVED		TITLE <b>TOP PANEL ASSEMBLY</b>	SCALE NTS
DE APPR.			
DATE	08.10.14	COPYRIGHT © 2007 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD</small>	

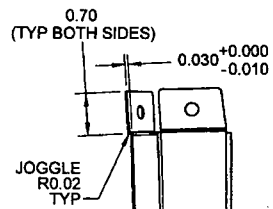
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

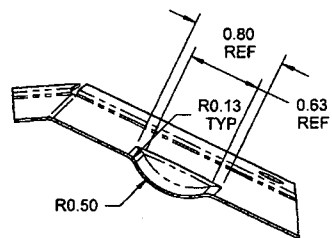
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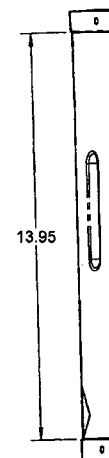
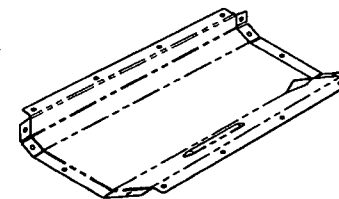
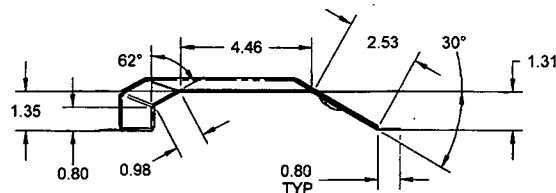
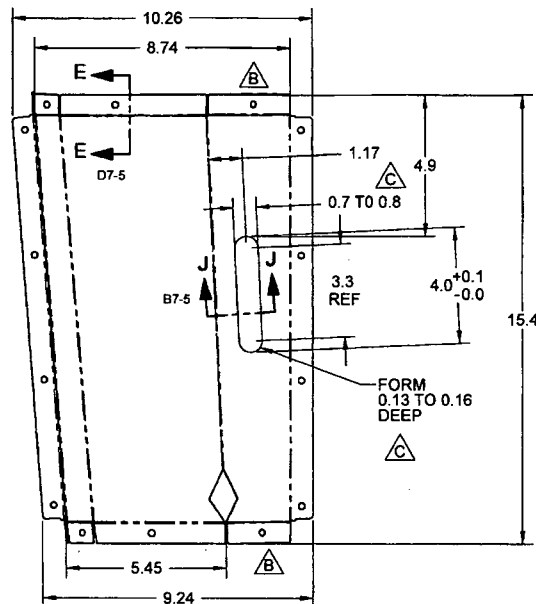
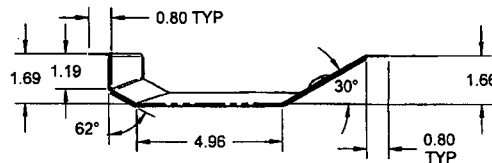
**NOTE:** Date & initial all entries



**SECTION E-E** D5-5  
SCALE 2X



**SECTION J-J** C5-5  
SCALE 3.5X







DEO ATTACHED

RELEASED  
8/11/17 MJD

- NOTES:  
1) FINISH: NONE  
2) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED  
3) UNITS: INCHES UNLESS OTHERWISE NOTED  
4) BREAK SHARP EDGES: 0.005 TO 0.010 MAX  
5) IDENTIFICATION: NONE

**D3650-3B CENTER PANEL BENT PART**  
(MAKE FROM D3650-3F FLAT PATTERN)

UNDER REVIEW  
10/09/2017 OK 9/20/17

DESIGN	RF	<b>DART AEROSPACE LTD</b>	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3650	SHEET 5 OF 9
APPROVED		TITLE	SCALE
DE APPR.		TOP PANEL ASSEMBLY	NTS
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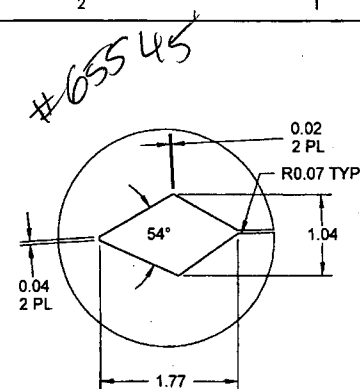
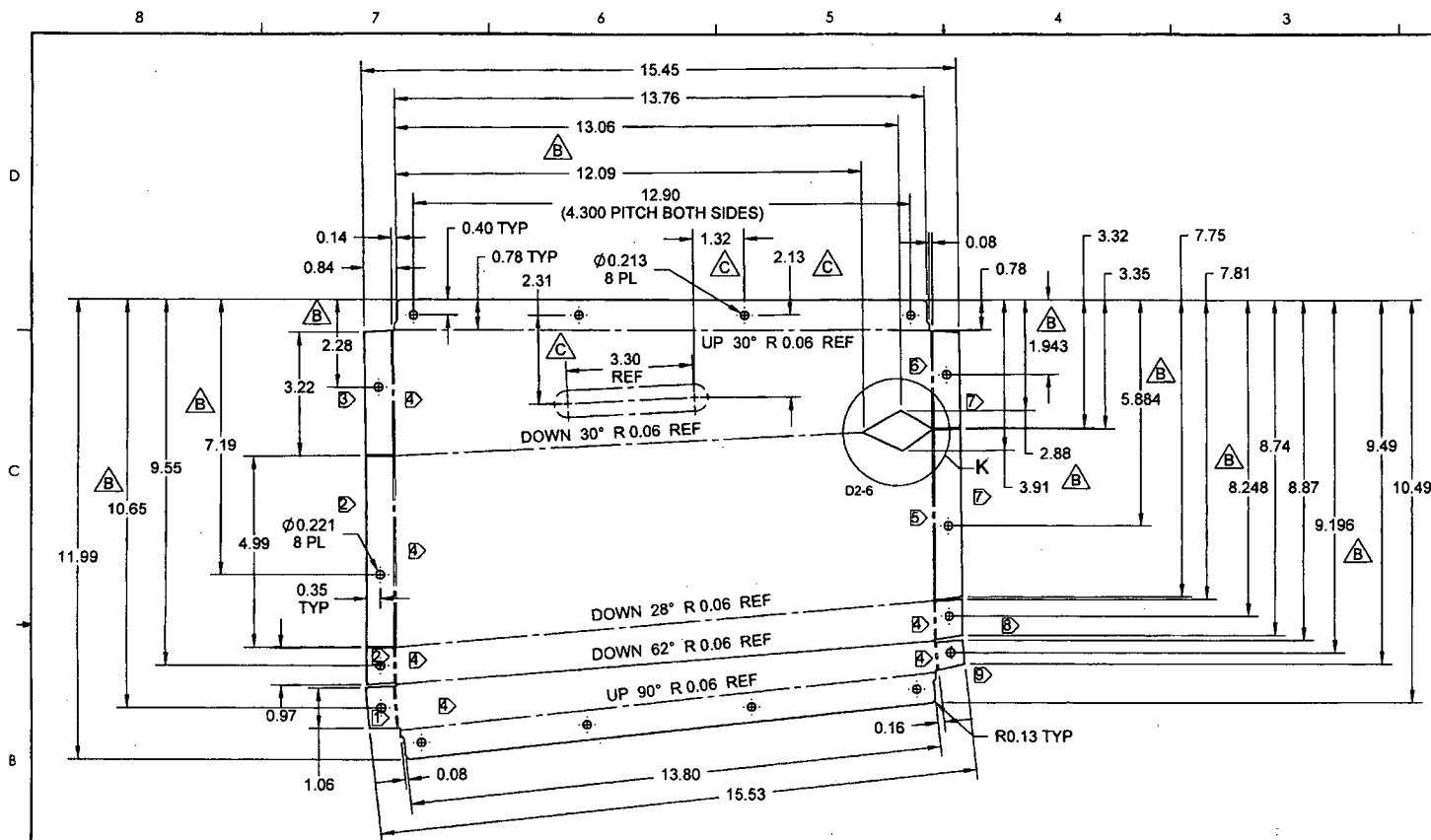
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

• **NOTE:** Date & initial all entries



C5-6 **DETAIL K**  
SCALE 2X

**DEO ATTACHED**




- ① DOWN 92° R 0.015
- ② DOWN 89° R 0.015
- ③ DOWN 86° R 0.015
- ④ UP 90° R 0.015
- ⑤ UP 88° R 0.015
- ⑥ UP 90° R 0.015
- ⑦ DOWN 88° R 0.015
- ⑧ DOWN 90° R 0.015
- ⑨ DOWN 94° R 0.015

**D3650-3F CENTER PANEL FLAT PATTERN**

**D3650-3F NOTES:**

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL 0.018 THICK (26 GAUGE) SHEET, PER MIL-S-5059 OR AMS 5513/5524 (REF. DART SPEC. M304S26GA)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE

**UNDER REVIEW**

DESIGN	RF	<b>DART AEROSPACE LTD</b>	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		<b>D3650</b>	SHEET 6 OF 9
APPROVED		TITLE	SCALE
DE APPR.		<b>TOP PANEL ASSEMBLY</b>	NTS
DATE	<b>08.10.14</b>	COPYRIGHT © 2007 BY DART AEROSPACE LTD	
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**RELEASED**  
08/11/17

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



MS21062-3K NUTPLATE  
MS20427M3-3 RIVET, 2 PL  
2 PL

MS21060-3K NUTPLATE  
MS20427M3-3 RIVET, 2 PL  
2 PL

NAS1149CN432R  
WASHER, REF

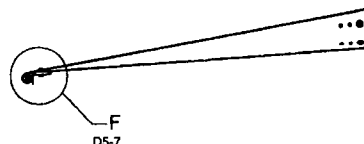
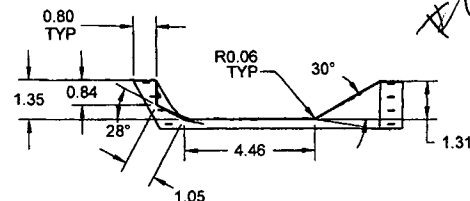
0.74  
0.07

D3650-5B FWD PANEL  
BENT PART  
REF

MS20615-4M5  
RIVET, REF

D3650-7-8.19 SEAL  
D3650-9 ANGLE

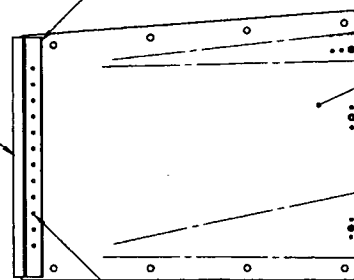
DETAIL F  
SCALE 3.5X



D3650-9 REF

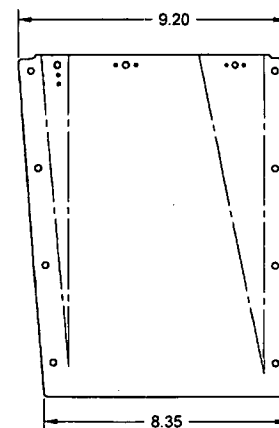
D3650-5B  
FWD PANEL  
BENT PART

D3650-7-8.19  
REF



CENTRE D3650-7/-9 ON D3650-5B &  
TRANSFER Ø0.129 (#30 DRILL) HOLES  
FROM D3650-9 TO D3650-7 & D3650-5B  
AS SHOWN  
INSTALL  
MS20615-4M5 RIVET  
NAS1149CN432R WASHER  
12 PL

D3650-5 FWD PANEL



D3650-5B FWD PANEL BENT PART  
(MAKE FROM D3650-5F FLAT PATTERN)

DEO ATTACHED

RELEASED  
28/11/17/MB

# PART LIST

QTY	PART NUMBER	DESCRIPTION
-5		
X	D3650-5	FWD PANEL
1	D3650-5B	FWD PANEL BENT PART
1	D3650-7-8.19	SEAL
1	D3650-9	ANGLE
12	NAS1149CN432R	WASHER
12	MS20615-4M5	RIVET
8	MS20427M3-3	RIVET
2	MS21060-3K	NUTPLATE
2	MS21062-3K	NUTPLATE

## NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL 0.018 THICK (26 GAUGE) SHEET, PER MIL-S-5059 OR AMS 5513/5524 (REF. DART SPEC. M304S26GA)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.8 lbs

UNDER REVIEW  
OK 28.06.24

DESIGN	RF	DART AEROSPACE LTD
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA
CHECKED		DRAWING NO. D3650
MFG. APPR.		REV. C
APPROVED		SHEET 7 OF 9
DE APPR.		SCALE
DATE	08.10.14	TITLE TOP PANEL ASSEMBLY
		NTS

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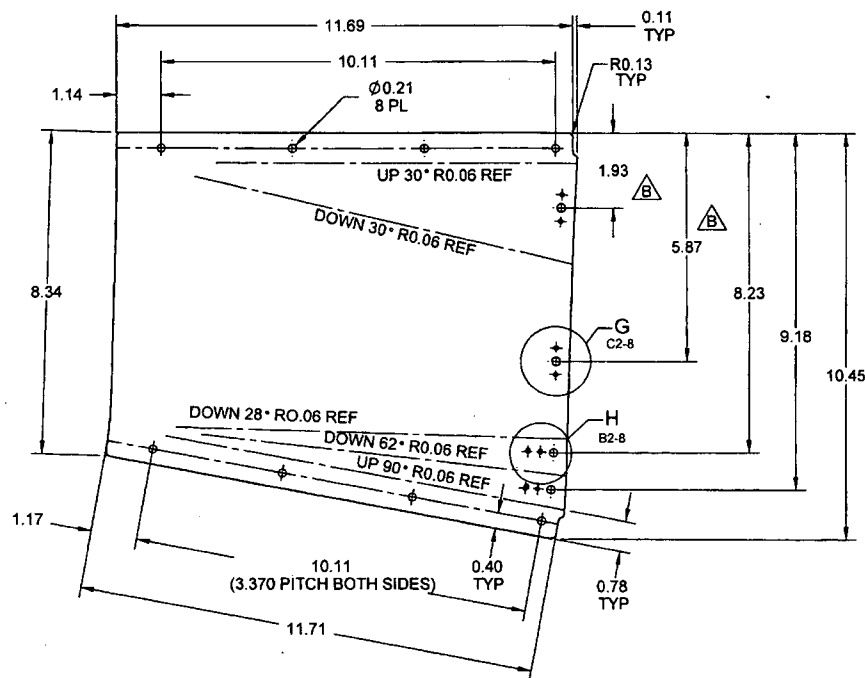
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



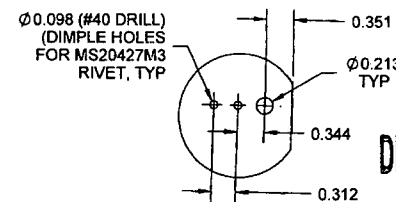
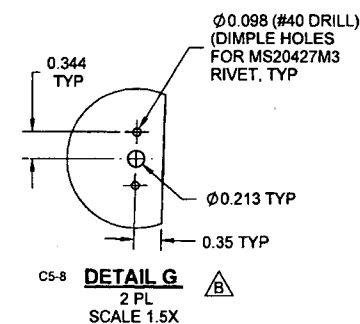
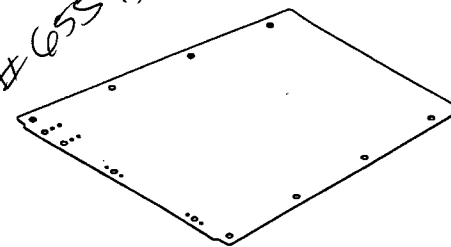
**D3650-5F FLAT PATTERN**

**NOTES:**

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL 0.018 THICK (26 GAUGE) SHEET, PER MIL-S-5059 OR AMS 5513/5524 (REF. DART SPEC. M304S26GA)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.6 lb





**UNDER REVIEW**  
*[Signature]*  
 CK 11/04/24

#65545



DEO ATTACHED

**RELEASED**  
 08/11/17-16

DESIGN	RF	<b>DART AEROSPACE LTD</b>	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		<b>D3650</b>	SHEET 8 OF 9
APPROVED		TITLE	SCALE
DE APPR.		<b>TOP PANEL ASSEMBLY</b>	NTS
DATE	<b>08.10.14</b>	COPYRIGHT © 2007 BY DART AEROSPACE LTD	
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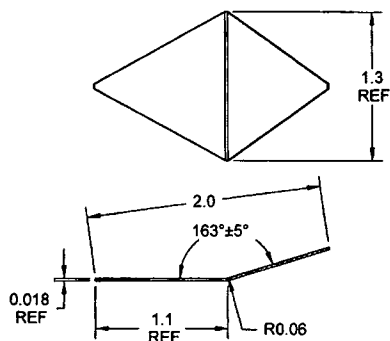
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

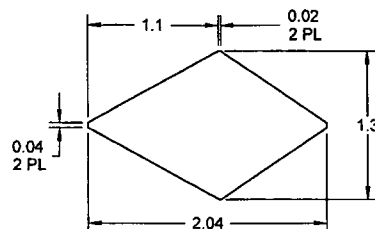
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

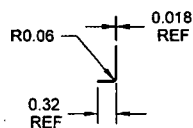


**D3650-11 FILLER PLATE**  
(MAKE FROM D3650-11F FLAT PATTERN)

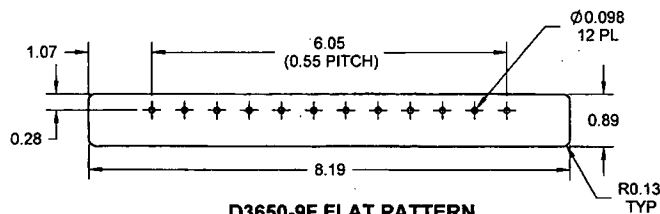


**D3650-11F FLAT PATTERN**

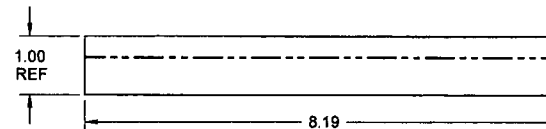
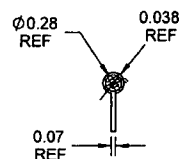
#65545



**D3650-9 ANGLE**  
(MAKE FROM D3650-9F FLAT PATTERN)



**D3650-9F FLAT PATTERN**



**D3650-7-8.19 SEAL**

**D3650-7-8.19 NOTES:**

- 1) MATERIAL: P/N 8168-1 TADPOLE SEAL (REF. BELL P/N 120-104-1)  
POSSIBLE SUPPLIER: EAGLE COPTERS OR BELL
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.05 lb
- 8) PART NUMBER: D3650-7-X.XX  
WHERE X.XX = LENGTH IN INCHES  
EG. 12.50" LONG = D3650-7-12.50




DEO ATTACHED

RELEASED  
08/10/14

**D3650-9 & D3650-11 NOTES:**

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL 0.018 THICK (26 GAUGE) SHEET,  
PER MIL-S-5059 OR AMS 5513/5524 (REF. DART SPEC. M304S26GA)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) D3650-9 WEIGHT: 0.05 lb  
D3650-11 WEIGHT: 0.007 lb

UNDER REVIEW  
08/07/14  
OK 08/12/14

DESIGN	RF	<b>DART AEROSPACE LTD</b>	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	B	DRAWING NO.	REV. C
MFG. APPR.		D3650	SHEET 9 OF 9
APPROVED		TITLE	SCALE
DE APPR.		TOP PANEL ASSEMBLY	NTS
DATE	08.10.14	COPYRIGHT © 2007 BY DART AEROSPACE LTD	
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

• **NOTE:** Date & initial all entries

DRAWING NO. D3650	TITLE TOP PANEL ASSEMBLY	REV. C	DART AEROSPACE LTD ENGINEERING ORDER		D.E.O. NO. D3650-C-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN CP	CHECKED	MFG. APPR. <i>EC</i>	APPROVED <i>[Signature]</i>		DE APPR. <i>[Signature]</i>		
DATE 09.06.12	DATE 04.06.15	DATE 09.06.15	DATE 09/06/15		DATE 09/06/15		

**TO AMEND D3650-5 FWD PANEL:**

REF PAR 09-008. THE QTY(12) NAS1149CN432R WASHERS ARE REPLACED WITH QTY(1) D3893-1 DOUBLER. THE QTY(12) MS20615-4M5 RIVETS ARE REPLACED WITH QTY(12) NAS9307M-4-03 RIVETS. LOCATION OF THE DOUBLER IS SHOWN IN THE AMENDED DETAIL F (DWG SHEET 7) BELOW. THE PARTS LIST FOR D3650-5 IS AMENDED AS FOLLOWS:

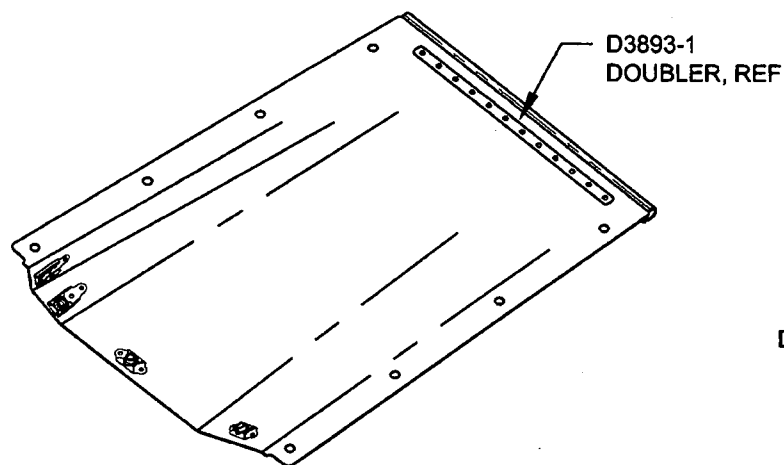
**IS:**

QTY	PART NUMBER	DESCRIPTION
-5		
1	D3893-1	DOUBLER
12	NAS9307M-4-03	RIVET (OR CR3523-4-03)

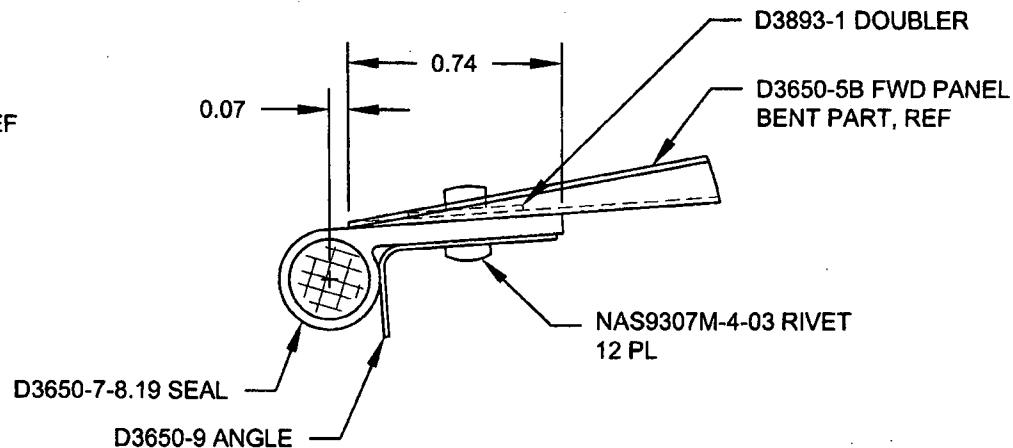
**WAS:**

QTY	PART NUMBER	DESCRIPTION
-5		
12	NAS1149CN432R	WASHER
12	MS20615-4M5	RIVET

**RELEASED**  
09/06/15



**D3650-5 FWD PANEL**



**DETAIL F** C5-7  
SCALE 3.5X

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

• **NOTE:** Date & initial all entries